

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An automatically and manually folded portable wireless terminal having at least a main body and a sub-body installed on the main body so as to be opened and closed, comprising:

a first sensor for sensing a complete opening of the sub-body from the main body;

a second sensor for sensing a complete closing of the sub-body onto the main body;

an opening/closing device for opening/closing the sub-body in accordance with a control of opening/closing of the sub-body and having a motor housed inside of the terminal;

a motor overcurrent monitoring section having a current sensing resistor located between a first node and a second node determining an overload condition of the motor based on a difference between a first voltage applied to the first node and a second voltage applied to the second node for monitoring current flow to the motor to determine an overload condition of the motor; and

a control device for controlling operation of the motor in accordance with the overload condition as determined by the motor overcurrent monitoring section when complete opening/closing of the sub-body is sensed by the first and the second sensors when the opening/closing device automatically opens/closes the sub-body, and after at least one additional cycle of the motor after an overload condition is determined.

2. (Previously Presented) The automatically and manually folded portable wireless terminal of claim 1, wherein the motor overcurrent monitoring section comprises:

the first node connected to a battery output line for applying the first voltage corresponding to the battery voltage to a first input end of the control device;

the second node connected between the first node and the motor for applying the second voltage, which corresponds to a current supplied to the motor, to a second input end of the control device; and

the current sensing resistor located between the first node and the second node sensing the current supplied to the motor from the first node through the second node.

3. (Cancelled)

4. (Currently Amended) A method for controlling opening/closing of a sub-body in a foldable portable wireless terminal having at least a main body, a sub-body installed on the main body so as to be openable and closable, a first sensor installed in the main body for sensing a complete opening of the sub-body from the main body, and a second sensor installed in the main body and the sub-body for sensing a complete closing of the sub-body onto the main body, the method comprising the steps of:

determining whether or not a complete opening/closing of the sub-body is sensed by the first and the second sensors during automatic opening/closing of the sub-body;

determining an overload condition of a motor housed inside of the terminal based on current supplied to the motor if incomplete opening/closing of the sub-body is sensed by using a current sensing resistor located between a first node and a second node and determining an overload condition of the motor based on a difference between a first voltage applied to the first node and a second voltage applied to the second node; and

controlling operation of the motor in accordance with the determined overload condition, and after at least one additional cycle of the motor after an overload condition is determined.

5. (Original) The method of claim 4, wherein the determination of the overload condition of the motor is made based on a voltage difference corresponding to a current difference between the current supplied to the motor in normal operation and the current supplied to the motor in the overload condition.

6. (Currently Amended) A method for controlling opening/closing of a sub-body in a foldable portable wireless terminal having a main body and a sub-body installed on the main body so as to be openable and closable, the method comprising the steps of:

operating a motor for automatically opening/closing the sub-body in accordance with an input by a user;

determining an overload condition of the motor for opening/closing the sub-body based on a voltage difference corresponding to a current difference between the current supplied to the

motor in a normal operation and the current supplied to the motor in the overload condition by using a current sensing resistor located between a first node and a second node and determining an overload condition of the motor based on a difference between a first voltage applied to the first node and a second voltage applied to the second; and

controlling operation of the motor for opening/closing the sub-body in accordance with the determined overload condition, and after at least one additional cycle of the motor after an overload condition is determined.

7. (Currently Amended) A method for controlling opening/closing of a sub-body in a foldable portable wireless terminal having at least a main body, a sub-body installed on the main body so as to be openable and closable, a first sensor for sensing a complete opening of the sub-body from the main body, and a second sensor for sensing a complete closing of the sub-body onto the main body, the method comprising the steps of:

determining an overloaded state of a motor housed inside of the terminal based on the current supplied to the housed motor if incomplete opening/closing of the sub-body is sensed by using a current sensing resistor located between a first node and a second node and determining an overload condition of the motor based on a difference between a first voltage applied to the first node and a second voltage applied to the second node;

controlling opening/closing of the sub-body repeatedly as many times as predetermined if incomplete opening/closing of the sub-body has been sensed and the housed motor is in an overloaded state; and

returning the sub-body to an initial state if incomplete opening/closing of the sub-body is sensed and the overloaded state continues ~~even~~ after at least one additional cycle of the motor ~~the controlling has been repeated the predetermined times.~~

8. (Currently Amended) A method for controlling opening/closing of a sub-body in an automatically and manually folded portable wireless terminal having at least a main body, a sub-body installed on the main body so as to be openable and closable, and a sensor for sensing a complete opening of the sub-body from the main body, the method comprising the steps of:

determining whether or not the sensor senses a complete opening of the sub-body during

automatic opening;

determining an overloaded state of a motor housed inside of the terminal based on current supplied to the housed motor if incomplete opening is sensed by the sensor and by using a current sensing resistor located between a first node and a second node and determining an overload condition of the motor based on a difference between a first voltage applied to the first node and a second voltage applied to the second node;

controlling opening of the sub-body as many times as predetermined if incomplete opening is sensed and the housed motor is determined to be in an overloaded state; and

ceasing operation of the housed motor if incomplete opening of the sub-body is sensed and the overloaded state of the housed motor continues ~~even~~ after at least one additional cycle of the motor ~~controlling the opening of the sub-body the predetermined times~~.